

RESULT 1
 US-09-523-656-37
 ; Sequence 37, Application US/09523656
 ; Patent No. 6458563
 ; GENERAL INFORMATION:
 ; APPLICANT: Lollar S., John
 ; TITLE OF INVENTION: MODIFIED FACTOR VIII
 ; FILE REFERENCE: 75-95I
 ; CURRENT APPLICATION NUMBER: US/09/523,656
 ; CURRENT FILING DATE: 2000-03-10
 ; EARLIER APPLICATION NUMBER: 09/037,601
 ; EARLIER FILING DATE: 1998-03-10
 ; EARLIER APPLICATION NUMBER: 08/670,707
 ; EARLIER FILING DATE: 1996-06-26
 ; NUMBER OF SEQ ID NOS: 38
 ; SOFTWARE: PatentIn Ver. 2.0
 ; SEQ ID NO 37
 ; LENGTH: 4404
 ; TYPE: DNA
 ; ORGANISM: Porcine
 ; FEATURE:
 ; NAME/KEY: CDS
 ; LOCATION: (1)..(4401)
 US-09-523-656-37

Query Match 90.0%; Score 3962.6; DB 3; Length 4404;
 Best Local Similarity 93.8%; Pred. No. 0;
 Matches 4127; Conservative 0; Mismatches 274; Indels 0; Gaps 0;

Qy	1	ATGCAGCTAGAGCTCTCCACCTGTGTCTTTCTGTGCTCTTTGCCACTCGGCTTTAGTGCC	60
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Qy	61	ATCAGGAGATACTACCTGGGCGCAGTGGAAGTGTCTGGGACTACCGGCAAAGTGAATC	120
Db	61	ATCAGGAGATACTACCTGGGCGCAGTGGAAGTGTCTGGGACTACCGGCAAAGTGAATC	120
Qy	121	CTCCGTGAGCTGCACGTGGACACCAAGATTTCCTGCTACAGCGCCAGGAGCTCTTCCGTTG	180
Db	121	CTCCGTGAGCTGCACGTGGACACCAAGATTTCCTGCTACAGCGCCAGGAGCTCTTCCGTTG	180
Qy	181	GGCCCGTCAGTCCTGTACAAAAAGACTGTGTTTCGTAGAGTTCACGGATCAACTTTTCAGC	240
Db	181	GGCCCGTCAGTCCTGTACAAAAAGACTGTGTTTCGTAGAGTTCACGGATCAACTTTTCAGC	240
Qy	241	GTTGCCAGGCCAGGCCACCATGGATGGGTCTGCTGGGTCTACCATCCAGGCTGAGGTT	300
Db	241	GTTGCCAGGCCAGGCCACCATGGATGGGTCTGCTGGGTCTACCATCCAGGCTGAGGTT	300
Qy	301	TACGACACGGTGGTCGTTACCTGAAGAACATGGCTTCTATCCCGTTAGTCTTCACGCT	360
Db	301	TACGACACGGTGGTCGTTACCTGAAGAACATGGCTTCTATCCCGTTAGTCTTCACGCT	360
Qy	361	GTCGGCGTCTCCTTCTGGAATCTTCCGAAGGCGCTGAATATGAGGATCACACCAAGCAA	420
Db	361	GTCGGCGTCTCCTTCTGGAATCTTCCGAAGGCGCTGAATATGAGGATCACACCAAGCAA	420

Qy 421 AGGGAGAAGGAAGACGATAAAGTCCTTCCCGGTAAAAGCCAAACCTACGTCTGGCAGGTC 480
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Qy 481 CTGAAAGAAAAATGGTCCAACAGCCTCTGACCCACCATTGTCTTACCTACTCATACCTGTCT 540
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Qy 541 CACGTGGACCTGGTGAAGACCTGAATTCGGGCCTCATTGGAGCCCTGCTGGTTTGTAGA 600
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 Db 541 CACGTGGACCTGGTGAAGACCTGAATTCGGGCCTCATTGGAGCCCTGCTGGTTTGTAGA 600
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 Db 721 GATCCCGCACCTGCCAGGGCCAGCCTGCAATGCACACAGTCAATGGCTATGTCAACAGG 780
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 Db 841 GGCACCAGCCCGGAAGTGCACTCCATTTTCTTGAAGGCCACACGTTTCTCGTAGGCAC 900
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 Db 901 CATCGCCAGGCTTCTTGGAGATCTCGCCACTAATTTCTCACTGCTCAGACATTCTTG 960
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Qy 961 ATGGACCTTGGCCAGTTCTCTACTGTTTGTGCATATCTCTCCACACCACATGGTGGCATG 1020
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Qy 1021 GAGGCTCAGCTCAGAGTAGAAAGCTGCGCCGAGGAGCCAGCTGCGGAGGAAAGCTGAT 1080
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Qy 1081 GAAGAGGAAGATTATGATGACAATTTGTACGACTCGGACATGGACGTGGTCCGGCTCGAT 1140
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Qy 1141 GGTGACGACGTGTCTCCCTTTATCCAAATCCGCTCAGTTGCCAAGAGCATCCTAAAACCT 1200
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Db	1321	AAATACAAAAAGCTCGAATTCGTGCGTTACACGGAATGTAACATTTAAGACTCGTAAAGCT	1380
Qy	1381	ATTGAGCATGAATCAGGAATCTTGGGACCTTTACTTTATGGGGAAGTTGGAGACACACTG	1440
Db	1381	ATTCCGTATGAATCAGGAATCCTGGGACCTTTACTTTATGGAGAAGTTGGAGACACACTT	1440
Qy	1441	TTGATTATATTTAAGAAATCAAGCAAGCAGACCATATAACATCTACCCCTCAGGAACACT	1500
Db	1441	TTGATTATATTTAAGAAATAAGCGAGCCGACCATATAACATCTACCCCTCATGGAACACT	1500
Qy	1501	GATGTCGCTCCTTTGTATTCAAGGAGATTACCAAAGGTTGAAAACATTTGAAGGATTTT	1560
Db	1501	GATGTCAGCGCTTTGCACCCAGGAGACTTCTAAAAGGTTGGAACATTTGAAAGACATG	1560
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Db	1561	CCAATTCTGCCAGGAGAGACTTTCAGATATAAATGGACAGTGACTGTGGGAAGATGGGCCA	1620
Qy	1621	ACTAAATCAGATCCGCGGTGCTGACCCGCTATTACTCTAGTTTCGTTAATATGGAGAGA	1680
Db	1621	ACCAAGTCCGATCTCGGTGCTGACCCGCTACTACTCGAGCTCCATTAATCTAGAGAAA	1680
Qy	1681	GATCTAGCTTCAGGACTCATTGGCCCTCTCCTCATCTGCTACAAAGAATCTGTAGATCAA	1740
Db	1681	GATCTGGCTTCGGGACTCATTGGCCCTCTCCTCATCTGCTACAAAGAATCTGTAGACCAA	1740
Qy	1741	AGAGGAAACAGATAATGTCAGACAAGAGGAATGTCATCCTGTTTTCTGTATTGTATGAG	1800
Db	1741	AGAGGAAACAGATGATGTCAGACAAGAGAAACGTCATCCTGTTTTCTGTATTTCGATGAG	1800
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Db	1801	AATCAAAGCTGGTACCTCGCAGAGAAATATTACGCGCTTCTCCCAATCCGGATGGATT	1860
Qy	1861	CAGCTTGAGGATCCAGAGTTCGAAGCTCCAACATCATGCACAGCATCAATGGCTATGTT	1920
Db	1861	CAGCCCCAGGATCCAGAGTTCGAAGCTTCTAACATCATGCACAGCATCAATGGCTATGTT	1920
Qy	1921	TTTGTAGTTTTCAGATTGTCAGTTGTTTTCGATAGGTTGGCATACTGGTACATTCTAAGC	1980
Db	1921	TTTGTAGCTTTCAGCTGTCGGTTGTTTTCGACAGAGTTGGCATACTGGTACATTCTAAGT	1980
Qy	1981	ATTGGAGCAGAGCTGACTTCCTTTCTGCTCTTCTCTGGATATACCTTCAAACACAAA	2040
Db	1981	GTTGGAGCAGAGCGAGCTTCTCTCCGCTCTCTCTCTGGCTACACCTTCAAACACAAA	2040
Qy	2041	ATGGTCTATGAAGACACTCACCTATTCCCAATCTCAGGAGAAACGTCTTCATGTCG	2100
Db	2041	ATGGTCTATGAAGACACTCACCTGTTCCCTTCTCAGGAGAAACGGTCTTCATGTCA	2100
Qy	2101	ATGGAACACCGAGTCTATGGATTCTGGGGTGCCACAACCTCAGACTTTCGGGAACAGAGGC	2160

Db	2100	ATGGAACACCCAGGCTCTCTGGGTCCTTGGGTGCCACAACCTCAGACTTGCAGAACAGAGGG	2160
Qy	2161	ATGACCGCCTTACTGAAGGTTTCTAGTTGTGACAAGAACACTGGTGATTATTACGAGGAC	2220
Db	2161	ATGACAGCCTTACTGAAGGTGTATAGTTGTGACAGGACATTGGTGATTATTATGACAAAC	2220
Qy	2221	AGTTATGAAGATATTTTCAGCATACTTGCTGAGTAAAAACAATGCCATTGAACCTAGGAGC	2280
Db	2221	ACTTATGAAGATATTCAGGCTTCTTGCTGAGTGGAAGAAGTGCATTGAACCTAGGAGC	2280
Qy	2281	TTTGGCCAGAATTCAAGACCCCTAGTGCAGCGCTCCAAGCCTCCGGTCTCGCAGCG	2340
Db	2281	TTTGGCCAGAATTCAAGACCCCTAGTGCAGCGCTCCAAGCCTCCGGTCTCGCAGCG	2340
Qy	2341	CATCAGAGGGACATAAGCCTTCTCTACTTTTCAGCCGGAGGAAGACAAAATGGACTATGAT	2400
Db	2341	CATCAGAGGGACATAAGCCTTCTCTACTTTTCAGCCGGAGGAAGACAAAATGGACTATGAT	2400
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Db	2401	GATATCTTCTCAACTGAAACGAAGGGAGAAGATTTTGACATTTACGGTGAGGATGAAAAT	2460
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Db	2461	CAGGACCTTCGCAGCTTTCAGAAGAGAACCAGCACTATTTCATTGCTGCGGTGGAGCAG	2520
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Db	2881	ACAGAAGACGAGTTTGACTGCAAGGCTGGGCTACTTTTCTGATGTTGACCTGGAAGAAA	2940
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 Db 3541 TGGGCCCCAAAGCTGGCCAGACTTCATTATTTCCGGATCAATCAATGCCTGGAGCACCAAG 3600

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 Db 3601 GATCCCACTCTCTGGATCAAGGTGGATCTGTTGGCACCATGATCATTACGGCATCATG 3660

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Qy 3721 AGTCTTGATGGGAAGAAGTGGCAGACTTATCGAGGAATTCCTGGAACCTTAATGGTC 3780
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 Db 3901 TTGATGGGCTGTGATTAAACAGTTGCAGCATGCCCTGGGAATGCAGAATAAAGCGATA 3960

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RESULT 2

US-08-670-707A-38

; Sequence 38, Application US/08670707A

; Patent No. 5859204

; GENERAL INFORMATION:

; APPLICANT: Lollar, John S.

; TITLE OF INVENTION: Hybrid Human/Animal Factor VIII

; NUMBER OF SEQUENCES: 40

; CORRESPONDENCE ADDRESS:

; ADDRESSEE: Greenlee, Winner and Sullivan, P.C.

; STREET: 5370 Manhattan Circle Suite 201

; CITY: Boulder

; STATE: Colorado

; COUNTRY: USA

; ZIP: 80303

; COMPUTER READABLE FORM:

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; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/670,707A
; FILING DATE: 26-JUN-1996
; CLASSIFICATION: 435
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: WO PCT/US94/13200
; FILING DATE: 15-NOV-1994
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/212,133
; FILING DATE: 11-MAR-1994
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/864,004
; FILING DATE: 07-APR-1992
; ATTORNEY/AGENT INFORMATION:
; NAME: Greenlee, Lorraine L.
; REGISTRATION NUMBER: 27,894
; REFERENCE/DOCKET NUMBER: 75-95F
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 303/499-8080
; TELEFAX: 303/499-8089
; INFORMATION FOR SEQ ID NO: 38:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 4334 base pairs
; TYPE: nucleic acid
; STRANDEDNESS: double
; TOPOLOGY: not relevant
; MOLECULE TYPE: cDNA to mRNA
; HYPOTHETICAL: NO
; ORIGINAL SOURCE:
; INDIVIDUAL ISOLATE: Factor VIII lacking B domain
; FEATURE:
; NAME/KEY: CDS
; LOCATION: 3..4334
US-08-670-707A-38

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Query Match      86.4%; Score 3802.2; DB 2; Length 4334;
Best Local Similarity 92.0%; Pred. No. 0;
Matches 4051; Conservative 0; Mismatches 278; Indels 72; Gaps 1;

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Qy      61 ATCAGGAGATACTACCTGGGCGCAGTGGAAGTGTCTCTGGGACTACCGGCAAAGTGAAGTC 120
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Qy      121 CTC CGT GAG CTG CAG CTG GAC CAG ATT TC CTG CTAC AG CGC CAG GAG CTCTT CCG TTG 180
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Qy 661 GTCCTTTGATGAAGGGAAAAAGTTGGCACTCAGCAAGAAATGACTCCTGGACACGGGCCATG 720
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Qy 841 GGCACCAGCCCGGAAGTGCACTCCATTTTCTTGAAGGCCACACGTTTCTCGTGAGGCAC 900
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Qy 1441 TTGATTATATTTAAGAATCAAGCAAGCAGACCATAACATCTACCTCACGGAATCACT 1500
 Db 1443 TTGATTATATTTAAGAATAAAGCGAGCCGACCATAACATCTACCTCATGGAATCACT 1502

Qy 1501 GATGTCGCGCTTTGTATTCAAGGAGATTACCAAAAGGTGTAAGACATTGGAAGATTTT 1560
 Db 1503 GATGTCAGCGCTTTGCACCCAGGGAGACTTCTAAAAGGTGGAAACATTGGAAGACATG 1562

Qy 1561 CCAATTCTGCCAGGAGAAATATTCAAATATAAATGGACAGTACTGTAGAAGATGGGCCA 1620
 Db 1563 CCAATTCTGCCAGGAGAGACTTTCAAGTATAAATGGACAGTACTGTGAAGATGGGCCA 1622

Qy 1621 ACTAAATCAGATCCGCGGTGCCTGACCCGCTATTACTCTAGTTTCGTTAATATGGAGAGA 1680
 Db 1623 ACCAAGTCCGATCCTCGGTGCCTGACCCGCTACTACTCGAGCTCCATTATCTAGAGAAA 1682

Qy 1681 GATCTAGCTTCAGGACTCATTGGCCCTCTCCTCATCTGCTACAAGAATCTGTAGATCAA 1740
 Db 1683 GATCTGGCTTCGGGACTCATTGGCCCTCTCCTCATCTGCTACAAGAATCTGTAGACCAA 1742

Qy 1741 AGAGGAAACAGATAATGTGACAGAAAGGAATGTATCCTGTTTTCTGTATTGATGAG 1800
 Db 1743 AGAGGAAACAGATGATGTGACAGAAAGGAAGCGTCATCCTGTTTTCTGTATTGATGAG 1802

Qy 1801 AACCGAAGCTGGTACCTCACAGAGAATATACAACGCTTTCTCCCCAATCCAGCTGGAGTG 1860
 Db 1803 AATCAAAGCTGGTACCTCGCAGAGAATATTCAGCGCTTCTCCCCAATCCGATGGATTA 1862

Qy 1861 CAGCTTGAGGATCCAGAGTTCCAAGCTCCAACATCATGCACAGCATCAATGGCTATGTT 1920
 Db 1863 CAGCCCCAGGATCCAGAGTTCCAAGCTTCTAACATCATGCACAGCATCAATGGCTATGTT 1922

Qy 1921 TTTGATAGTTTGCAGTTGTCTAGTTTGTTCATGAGGTGGCATACTGGTACATTCTAAGC 1980
 Db 1923 TTTGATAGCTTGCAGCTGTCTGGTTTGTTCACAGAGGTGGCATACTGGTACATTCTAAGT 1982

Qy 1981 ATTGGAGCACAGACTGACTTCCTTTCTGTCTTCTTCTCTGGATATACCTTCAAAACACAAA 2040
 Db 1983 GTTGGAGCACAGACGGACTTCCTCTCCGTCTTCTTCTCTGGCTACACCTTCAAAACACAAA 2042

Qy 2041 ATGGTCTATGAAGACACACTCACCTATTCCCATTCTCAGGAGAACTGTCTTCATGTCTG 2100
 Db 2043 ATGGTCTATGAAGACACACTCACCTGTTCCCTTCTCAGGAGAAACGCTCTTCATGTCA 2102

Qy 2101 ATGGAACACCCAGGCTCTATGGATTCTGGGGTGGCACAACCTCAGACTTTCGGAACAGAGGC 2160
 Db 2103 ATGGAACACCCAGGCTCTGGGTCTAGGGTGGCACAACCTCAGACTTTCGGAACAGAGGG 2162

Qy 2161 ATGACCCGCTTACTGAAGGTTTCTAGTTGTGACAAGAACTGGTGATTATTACGAGGAC 2220
 Db 2163 ATGACAGCCTTACTGAAGGTGTATAGTTGTGACAGGGACATTGGTGATTATTATGACAAC 2222

Qy 2221 AGTTATGAAGATATTTTCAGCATACTTGCTGAGTAAAAACAATGCCATTGAACCTAGGAGC 2280
 Db 2223 ACTTATGAAGATATTTTCAGGCTTCTTGCTGAGTGAAAGAAATGTCATTGAACCCAGA--- 2279

Qy 2281 TTTGCCCAGAATTCAAGACCCCTAGTGCAGCGCTCCAAGCCTCCGGTCTCGCAGCG 2340
 Db 2280 ----- 2279

Qy 2341 CATCAGAGGGACATAAGCCTTCTACTTTTCAGCCGGAGGAAGACAAAATGGACTATGAT 2400
 Db 2280 -----GACATAAGCCTTCTACTTTTCAGCCGGAGGAAGACAAAATGGACTATGAT 2330

Qy 2401 GATATCTTCTCAACTGAAACGAAGGGAGAAGATTTTGACATTACGGTGAGGATGAAAAT 2460
 Db 2331 GATATCTTCTCAACTGAAACGAAGGGAGAAGATTTTGACATTACGGTGAGGATGAAAAT 2390

Qy 2461 CAGGACCCTCGCAGCTTTCAGAAGAGAACCCGACACTATTTTCATTGCTCGGTTGGAGCAG 2520
 Db 2391 CAGGACCCTCGCAGCTTTCAGAAGAGAACCCGACACTATTTTCATTGCTCGGTTGGAGCAG 2450

Qy 2521 CTCTGGGATTACGGGATGAGCGAATCCCCCGGGCGCTAAGAAACAGGGCTCAGAACGGA 2580
 Db 2451 CTCTGGGATTACGGGATGAGCGAATCCCCCGGGCGCTAAGAAACAGGGCTCAGAACGGA 2510

Qy 2581 GAGGTGCCTCGGTTCAAGAAGGTGGTCTTCCGGGAATTTGCTGACGGCTCCTTCACGCAG 2640
 Db 2511 GAGGTGCCTCGGTTCAAGAAGGTGGTCTTCCGGGAATTTGCTGACGGCTCCTTCACGCAG 2570

Qy 2641 CCGTCGTACCCGCGGGAACCTCAACAAACACTTGGGGCTCTTGGGACCCCTACATCAGAGCG 2700
 Db 2571 CCGTCGTACCCGCGGGAACCTCAACAAACACTTGGGGCTCTTGGGACCCCTACATCAGAGCG 2630

Qy 2701 GAAGTTGAAGACAACATCATGGTAACTTCAAAAACAGGGCTCTCGTCCCTATTCTCTC 2760
 Db 2631 GAAGTTGAAGACAACATCATGGTAACTTCAAAAACAGGGCTCTCGTCCCTATTCTCTC 2690

Qy 2761 TACTCGAGCCTTATTCTTATCCGGATGATCAGGAGCAAGGGGAGAACTCGACACAAC 2820

Db	2691	 TACTCGAGCCTTATTCTTATCCGGATGATCAGGAGCAAGGGGAGAACCTCGACACAAC	2750
Qy	2821	TTCTGCCAGCCAAATGAAACCAGAACTTACTTTTGGAAAGTGCAGCATCACATGGCACCC	2880
Db	2751	TTCTGCCAGCCAAATGAAACCAGAACTTACTTTTGGAAAGTGCAGCATCACATGGCACCC	2810
Qy	2881	ACAGAAGACGAGTTTGTACTGCAAAAGCCTGGGCCTACTTTTCTGATGTTGACCTGGAAAAA	2940
Db	2811	ACAGAAGACGAGTTTGTACTGCAAAAGCCTGGGCCTACTTTTCTGATGTTGACCTGGAAAAA	2870
Qy	2941	GATGTGCACTCAGGCTTGATCGGCCCCCTTCTGATCTGCCGCGCCAACACCCCTGAACGCT	3000
Db	2871	GATGTGCACTCAGGCTTGATCGGCCCCCTTCTGATCTGCCGCGCCAACACCCCTGAACGCT	2930
Qy	3001	GCTCACGGTAGACAAGTGACCGTGCAAGAATTGCTCTGTTTTCCTACTATTTTGGATGAG	3060
Db	2931	GCTCACGGTAGACAAGTGACCGTGCAAGAATTGCTCTGTTTTCCTACTATTTTGGATGAG	2990
Qy	3061	ACAAAGAGCTGGTACTTCTACTGAAAATGTGAAAGGAATGCCGGGCCCCCTGCCATCTG	3120
Db	2991	ACAAAGAGCTGGTACTTCTACTGAAAATGTGAAAGGAATGCCGGGCCCCCTGCCACCTG	3050
Qy	3121	CAGATGGAGGACCCCACTCTGAAAGAAAATAICGCTTCCATGCAATCAATGGCTATGTG	3180
Db	3051	CAGATGGAGGACCCCACTCTGAAAGAAAATAICGCTTCCATGCAATCAATGGCTATGTG	3110
Qy	3181	ATGGATACACTCCCTGGCTTAGTAATGGCTCAGAATCAAAGGATCCGATGGTATCTGCTC	3240
Db	3111	ATGGATACACTCCCTGGCTTAGTAATGGCTCAGAATCAAAGGATCCGATGGTATCTGCTC	3170
Qy	3241	AGCATGGGCAGCAATGAAAATATCCATTTCGATTCAITTTAGCGGACACGTGTTTCAAGTGA	3300
Db	3171	AGCATGGGCAGCAATGAAAATATCCATTTCGATTCAITTTAGCGGACACGTGTTTCAAGTGA	3230
Qy	3301	CGGAAAAGGAGGAGTATAAAATGGCCGTGTACAATCTCTATCCGGGTGTCTTTGAGACA	3360
Db	3231	CGGAAAAGGAGGAGTATAAAATGGCCGTGTACAATCTCTATCCGGGTGTCTTTGAGACA	3290
Qy	3361	GTGGAATGCTACCGTCCAAAGTTGGAATTTGGCGAATAGAATGCCTGATTGGCGAGCAC	3420
Db	3291	GTGGAATGCTACCGTCCAAAGTTGGAATTTGGCGAATAGAATGCCTGATTGGCGAGCAC	3350
Qy	3421	CTGCAAGCTGGGATGAGCAGCACTTTCTCGGTGTACAGCAAGAAGTGTGAGACTCCCTG	3480
Db	3351	CTGCAAGCTGGGATGAGCAGCACTTTCTCGGTGTACAGCAAGGAGTGTGAGCTCCACTG	3410
Qy	3481	GGAATGGCTTCTGGACACATTAGAGATTTTCAGATTACAGCTTCAGGACAATATGGACAG	3540
Db	3411	GGAATGGCTTCTGGACGATTAGAGATTTTCAGATCACAGCTTCAGGACAGTATGGACAG	3470
Qy	3541	TGGGCCCCAAAGCTGGCCAGACTTCATTATTCGGATCAATCAATGCCTGGAGCACCAAG	3600
Db	3471	TGGGCCCCAAAGCTGGCCAGACTTCATTATTCGGATCAATCAATGCCTGGAGCACCAAG	3530
Qy	3601	GAGCCCTTTTCTTGGATCAAGGTGGATCTGTTGGCACAATGATTATTCACGGCATCAAG	3660

Db	3531	GATCCCCACTCCTGGATCAAGGTGGATCTGTTGGCACCATAATGATCATTCACGGCATCATG	3590
Qy	3661	ACCCAGGGTGCCCGTCAGAAGTTCTCCAGCCTCTACATCTCTCAGTTTATCATCATGTAT	3720
Db	3591	ACCCAGGGTGCCCGTCAGAAGTTTCCAGCCTCTACATCTCCCAGTTTATCATCATGTAC	3650
Qy	3721	AGTCTTGATGGGAAGAAGTGGCAGACTTATCGAGGAAATTCACATGGAACTTAAATGGTC	3780
Db	3651	AGTCTTGACGGGAGGAACATGGCAGAGTTACCGAGGGAATTCACGGGCACCTTAAATGGTC	3710
Qy	3781	TTCTTTGGCAATGTGGATTATCTGGGATAAAACACAATATTTTAAACCTCCAATATT	3840
Db	3711	TTCTTTGGCAATGTGGAGCATCTGGGATTAAACACAATATTTTAAACCTCCGATTGTG	3770
Qy	3841	GCTCGATACATCCGTTTGACCCCAACTCATTATAGCATTGCGAGCACTCTTCGCATGGAG	3900
Db	3771	GCTCGGTACATCCGTTTGACCCCAACACATTACAGCATCCGAGCACTCTTCGCATGGAG	3830
Qy	3901	TTGATGGGCTGTGATTTAAATAGTTGCAGCATGCCATTGGGAATGGAGAGTAAAGCAATA	3960
Db	3831	TTGATGGGCTGTGATTTAAACAGTTGCAGCATGCCCTGGGAATGCAGATAAAGCGATA	3890
Qy	3961	TCAGATGCACAGATTACTGCTTCATCCTACTTTACCAATATGTTTGCCACCTGGTCTCCT	4020
Db	3891	TCAGACTCACAGATCACGGCTCCTCCCACCTAAGCAATATATTTGCCACCTGGTCTCCT	3950
Qy	4021	TCAAAAGCTCGACTTCACCTCCAAGGAGGAGTAATGCCTGGAGACCTCAGGTGAATAAT	4080
Db	3951	TCACAAGCCGACTTCACCTCCAGGGGCGGACGAATGCCTGGCAGCCCGGGTGAGCAGC	4010
Qy	4081	CCAAAAGAGTGGCTGCAAGTGGACTTCCAGAAGACAATGAAAGTCACAGGAGTAACACT	4140
Db	4011	GCAGAGGAGTGGCTGCAGGTGGACTGTCAGAAGACGGTGAAGGTCACAGGCATCACACC	4070
Qy	4141	CAGGGAGTAAATCTCTGCTTACCAGCATGTATGTGAAGGAGTTCTCTCATCTCCAGCAGT	4200
Db	4071	CAGGGCGTGAAGTCCCTGCTCAGCAGCATGTATGTGAAGGAGTTCTCGTGCAGTAGT	4130
Qy	4201	CAAGATGGCCATCAGTGGACTCTCTTTTTCAGAATGGCAAGTAAAGGTTTTTCAGGGA	4260
Db	4131	CAGGACGGCGCGCTGGACCTGTTTCTTCAGGACGGCCACAGCAAGGTTTTTCAGGGC	4190
Qy	4261	AATCAAGACTCCTTCACACCTGTGGTGAACCTCTAGACCCACCGTTACTGACTCGCTAC	4320
Db	4191	AATCAGGACTCCTCCACCCCGTGGTGAACGCTCTGACCCCCCGCTGTTACGCGCTAC	4250
Qy	4321	CTTCGAATTACCCCCAGAGTTGGGTGCACACAGATTGCCCTGAGGATGGAGGTTCTGGGC	4380
Db	4251	CTGAGGATCCACCCACGAGCTGGGCGCAGCACATCGCCCTGAGGCTCGAGGTTCTAGGA	4310
Qy	4381	TGCGAGGCACAGGACCTCTAC	4401
Db	4311	TGTGAGGCACAGGACTCTAC	4331